

SEQUENCE LISTING

<110> Allan, Bernard
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Lavan, Brian
Moodie, Shonna
Metabolex, Inc.

<120> Methods of Diagnosing & Treating Diabetes and Insulin
Resistance

<130> 016325-013900US

<140> US 10/516,635

<141> 2004-11-03

<150> US 60/386,085

<151> 2002-06-04

<150> US 60/386,331

<151> 2002-06-05

<150> WO PCT/US03/17725

<151> 2003-06-04

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<210> 8

<211> 469

<212> PRT

<213> Homo sapiens

<220>

<223> human transforming growth factor-beta (TGFB)
inducible early growth response (TIEG)

<400> 8

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Tyr Ser Trp Asn Lys Thr Ala Glu Lys Ser Asp Phe Glu Ala Val Glu
          20                      25                      30

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Ala Leu Met Ser Met Ser Cys Ser Trp Lys Ser Asp Phe Lys Lys Tyr
          35                      40                      45

```

```

Val Glu Asn Arg Pro Val Thr Pro Val Ser Asp Leu Ser Glu Glu Glu
          50                      55                      60

```

```

Asn Leu Leu Pro Gly Thr Pro Asp Phe His Thr Ile Pro Ala Phe Cys
          65                      70                      75                      80

```

```

Leu Thr Pro Pro Tyr Ser Pro Ser Asp Phe Glu Pro Ser Gln Val Ser
          85                      90                      95

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```

Asn Leu Met Ala Pro Ala Pro Ser Thr Val His Phe Lys Ser Leu Ser
          100                      105                      110

```

```

Asp Thr Ala Lys Pro His Ile Ala Ala Pro Phe Lys Glu Glu Glu Lys
          115                      120                      125

```

```

Ser Pro Val Ser Ala Pro Lys Leu Pro Lys Ala Gln Ala Thr Ser Val
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Ile Arg His Thr Ala Asp Ala Gln Leu Cys Asn His Gln Thr Cys Pro
          145                      150                      155                      160

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Met Lys Ala Ala Ser Ile Leu Asn Tyr Gln Asn Asn Ser Phe Arg Arg
          165                      170                      175

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Arg Thr His Leu Asn Val Glu Ala Ala Arg Lys Asn Ile Pro Cys Ala
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Ala	Val	Ser	Pro	Asn	Arg	Ser	Lys	Cys	Glu	Arg	Asn	Thr	Val	Ala	Asp	195	200	205
Val	Asp	Glu	Lys	Ala	Ser	Ala	Ala	Leu	Tyr	Asp	Phe	Ser	Val	Pro	Ser	210	215	220
Ser	Glu	Thr	Val	Ile	Cys	Arg	Ser	Gln	Pro	Ala	Pro	Val	Ser	Pro	Gln	225	230	235 240
Gln	Lys	Ser	Val	Leu	Val	Ser	Pro	Pro	Ala	Val	Ser	Ala	Gly	Gly	Val	245	250	255
Pro	Pro	Met	Pro	Val	Ile	Cys	Gln	Met	Val	Pro	Leu	Pro	Ala	Asn	Asn	260	265	270
Pro	Val	Val	Thr	Thr	Val	Val	Pro	Ser	Thr	Pro	Pro	Ser	Gln	Pro	Pro	275	280	285
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Ala	Val	Met	Phe	Val	Val	Pro	Gln	Pro	Val	Val	Gln	Ser	Ser	Lys	Pro	305	310	315 320
Pro	Val	Val	Ser	Pro	Asn	Gly	Thr	Arg	Leu	Ser	Pro	Ile	Ala	Pro	Ala	325	330	335
Pro	Gly	Phe	Ser	Pro	Ser	Ala	Ala	Lys	Val	Thr	Pro	Gln	Ile	Asp	Ser	340	345	350
Ser	Arg	Ile	Arg	Ser	His	Ile	Cys	Ser	His	Pro	Gly	Cys	Gly	Lys	Thr	355	360	365
Tyr	Phe	Lys	Ser	Ser	His	Leu	Lys	Ala	His	Thr	Arg	Thr	His	Thr	Gly	370	375	380
Glu	Lys	Pro	Phe	Ser	Cys	Ser	Trp	Lys	Gly	Cys	Glu	Arg	Arg	Phe	Ala	385	390	395 400
Arg	Ser	Asp	Glu	Leu	Ser	Arg	His	Arg	Arg	Thr	His	Thr	Gly	Glu	Lys	405	410	415
Lys	Phe	Ala	Cys	Pro	Met	Cys	Asp	Arg	Arg	Phe	Met	Arg	Ser	Asp	His	420	425	430
Leu	Thr	Lys	His	Ala	Arg	Arg	His	Leu	Ser	Ala	Lys	Lys	Leu	Pro	Asn	435	440	445
Trp	Gln	Met	Glu	Val	Ser	Lys	Leu	Asn	Asp	Ile	Ala	Leu	Pro	Pro	Thr	450	455	460
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<210> 9

<211> 3045

<212> DNA

<213> Mus musculus

<220>
 <223> mouse transforming growth factor-beta (TGFB)
 inducible early growth response (TIEG) homolog
 cDNA

<220>
 <221> CDS
 <222> (114)..(1553)
 <223> TIEG homolog

<400> 9

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 <212> PRT
 <213> Mus musculus

<220>
 <223> mouse transforming growth factor-beta (TGFB)
 inducible early growth response (TIEG) homolog

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 20 25 30
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 35 40 45
 Cys Asp Trp Lys Ser His Phe Lys Lys Tyr Leu Glu Asn Arg Pro Val
 50 55 60
 Thr Pro Val Ser Asp Thr Ser Glu Asp Asp Ser Leu Leu Pro Gly Thr
 65 70 75 80
 Pro Asp Leu Gln Thr Val Pro Ala Phe Cys Leu Thr Pro Pro Tyr Ser
 85 90 95
 Pro Ser Asp Phe Glu Pro Ser Gln Gly Ser Asn Leu Thr Ala Ser Ala
 100 105 110
 Pro Ser Thr Gly His Phe Lys Ser Phe Ser Asp Ala Ala Lys Pro Pro
 115 120 125
 Gly Ala Thr Pro Phe Lys Glu Glu Glu Lys Asn Pro Leu Ala Ala Pro
 130 135 140
 Pro Leu Pro Lys Ala Gln Ala Thr Ser Val Ile Arg His Thr Ala Asp
 145 150 155 160
 Ala Gln Leu Cys Asn His Gln Ser Cys Pro Val Lys Ala Ala Ser Ile
 165 170 175
 Leu Asn Tyr Gln Asp Asn Ser Phe Arg Arg Arg Thr His Gly Asn Val
 180 185 190
 Glu Ala Thr Arg Lys Asn Ile Pro Cys Ala Ala Val Ser Pro Asn Arg
 195 200 205
 Ser Lys Pro Glu Pro Ser Thr Val Ser Asp Gly Asp Glu Lys Ala Gly
 210 215 220
 Ala Ala Leu Tyr Asp Phe Ala Val Pro Ser Ser Glu Thr Val Ile Cys
 225 230 235 240
 Arg Ser Gln Pro Ala Pro Ser Ser Pro Val Gln Lys Ser Val Leu Val
 245 250 255

Ser Ser Pro Thr Val Ser Thr Gly Gly Val Pro Pro Leu Pro Val Ile
 260 265 270
 Cys Gln Met Val Pro Leu Pro Ala Asn Asn Ser Leu Val Ser Thr Val
 275 280 285
 Val Pro Ser Thr Pro Pro Ser Gln Pro Pro Ala Val Cys Ser Pro Val
 290 295 300
 Leu Phe Met Gly Thr Gln Val Pro Glu Gly Thr Val Val Phe Val Val
 305 310 315 320
 Pro Gln Pro Val Val Gln Ser Pro Arg Pro Pro Val Val Ser Pro Ser
 325 330 335
 Gly Thr Arg Leu Ser Pro Ile Ala Pro Ala Pro Gly Phe Ser Pro Ser
 340 345 350
 Ala Ala Arg Val Thr Pro Gln Ile Asp Ser Ser Arg Val Arg Ser His
 355 360 365
 Ile Cys Ser His Pro Gly Cys Gly Lys Thr Tyr Phe Lys Ser Ser His
 370 375 380
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 385 390 395 400
 Ser Trp Lys Gly Cys Glu Arg Arg Phe Ala Arg Ser Asp Glu Leu Ser
 405 410 415
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 420 425 430
 Cys Asp Arg Arg Phe Met Arg Ser Asp His Leu Thr Lys His Ala Arg
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<210> 11
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 <212> DNA
 <213> Rattus norvegicus

<220>
 <223> rat transforming growth factor-beta (TGFB)
 inducible early growth response (TIEG) homolog
 cDNA

<220>
 <221> CDS
 <222> (316)..(1758)
 <223> TIEG homolog

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<210> 12
 <211> 480
 <212> PRT
 <213> *Rattus norvegicus*

<220>
 <223> rat transforming growth factor-beta (TGFB)
 inducible early growth response (TIEG) homolog

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 340 345 350
 Ser Ala Ala Arg Val Thr Pro Gln Ile Asp Ser Ser Arg Val Arg Ser
 355 360 365
 His Ile Cys Ser His Pro Gly Cys Gly Lys Thr Tyr Phe Lys Ser Ser
 370 375 380
 His Leu Lys Ala His Val Arg Thr His Thr Gly Glu Lys Pro Phe Ser
 385 390 395 400
 Cys Ser Trp Lys Gly Cys Glu Arg Arg Phe Ala Arg Ser Asp Glu Leu
 405 410 415
 Ser Arg His Arg Arg Thr His Thr Gly Glu Lys Lys Phe Ala Cys Pro
 420 425 430
 Met Cys Asp Arg Arg Phe Met Arg Ser Asp His Leu Thr Lys His Ala
 435 440 445
 Arg Arg His Leu Ser Ala Lys Lys Leu Pro Asn Trp Gln Met Glu Val
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<210> 13

<211> 2872

<212> DNA

<213> Homo sapiens

<220>

<223> human transforming growth factor-beta (TGFB)
 inducible early growth response (TIEG) splice
 variant cDNA

<220>

<221> CDS

<222> (87)..(1529)

<223> TIEG splice variant

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```

```

<210> 14
<211> 480
<212> PRT
<213> Homo sapiens

```

```

<220>
<223> human transforming growth factor-beta (TGFB)
      inducible early growth response (TIEG) splice
      variant

```

```

<400> 14
Met Leu Asn Phe Gly Ala Ser Leu Gln Gln Thr Ala Glu Glu Arg Met
 1             5             10             15

Glu Met Ile Ser Glu Arg Pro Lys Glu Ser Met Tyr Ser Trp Asn Lys
      20             25             30

Thr Ala Glu Lys Ser Asp Phe Glu Ala Val Glu Ala Leu Met Ser Met
      35             40             45

Ser Cys Ser Trp Lys Ser Asp Phe Lys Lys Tyr Val Glu Asn Arg Pro
      50             55             60

Val Thr Pro Val Ser Asp Leu Ser Glu Glu Glu Asn Leu Leu Pro Gly
      65             70             75             80

```

Thr	Pro	Asp	Phe	His	Thr	Ile	Pro	Ala	Phe	Cys	Leu	Thr	Pro	Pro	Tyr	
				85					90					95		
Ser	Pro	Ser	Asp	Phe	Glu	Pro	Ser	Gln	Val	Ser	Asn	Leu	Met	Ala	Pro	
			100					105					110			
Ala	Pro	Ser	Thr	Val	His	Phe	Lys	Ser	Leu	Ser	Asp	Thr	Ala	Lys	Pro	
		115					120					125				
His	Ile	Ala	Ala	Pro	Phe	Lys	Glu	Glu	Glu	Lys	Ser	Pro	Val	Ser	Ala	
	130					135					140					
Pro	Lys	Leu	Pro	Lys	Ala	Gln	Ala	Thr	Ser	Val	Ile	Arg	His	Thr	Ala	
145					150					155					160	
Asp	Ala	Gln	Leu	Cys	Asn	His	Gln	Thr	Cys	Pro	Met	Lys	Ala	Ala	Ser	
				165					170					175		
Ile	Leu	Asn	Tyr	Gln	Asn	Asn	Ser	Phe	Arg	Arg	Arg	Thr	His	Leu	Asn	
			180					185					190			
Val	Glu	Ala	Ala	Arg	Lys	Asn	Ile	Pro	Cys	Ala	Ala	Val	Ser	Pro	Asn	
		195					200					205				
Arg	Ser	Lys	Cys	Glu	Arg	Asn	Thr	Val	Ala	Asp	Val	Asp	Glu	Lys	Ala	
	210					215					220					
Ser	Ala	Ala	Leu	Tyr	Asp	Phe	Ser	Val	Pro	Ser	Ser	Glu	Thr	Val	Ile	
225					230					235					240	
Cys	Arg	Ser	Gln	Pro	Ala	Pro	Val	Ser	Pro	Gln	Gln	Lys	Ser	Val	Leu	
				245					250					255		
Val	Ser	Pro	Pro	Ala	Val	Ser	Ala	Gly	Gly	Val	Pro	Pro	Met	Pro	Val	
			260					265					270			
Ile	Cys	Gln	Met	Val	Pro	Leu	Pro	Ala	Asn	Asn	Pro	Val	Val	Thr	Thr	
		275					280					285				
Val	Val	Pro	Ser	Thr	Pro	Pro	Ser	Gln	Pro	Pro	Ala	Val	Cys	Pro	Pro	
	290					295					300					
Val	Val	Phe	Met	Gly	Thr	Gln	Val	Pro	Lys	Gly	Ala	Val	Met	Phe	Val	
305					310					315					320	
Val	Pro	Gln	Pro	Val	Val	Gln	Ser	Ser	Lys	Pro	Pro	Val	Val	Ser	Pro	
				325					330					335		
Asn	Gly	Thr	Arg	Leu	Ser	Pro	Ile	Ala	Pro	Ala	Pro	Gly	Phe	Ser	Pro	
			340					345					350			
Ser	Ala	Ala	Lys	Val	Thr	Pro	Gln	Ile	Asp	Ser	Ser	Arg	Ile	Arg	Ser	
		355					360					365				
His	Ile	Cys	Ser	His	Pro	Gly	Cys	Gly	Lys	Thr	Tyr	Phe	Lys	Ser	Ser	
	370					375					380					
His	Leu	Lys	Ala	His	Thr	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Phe	Ser	
385					390					395					400	

Cys Ser Trp Lys Gly Cys Glu Arg Arg Phe Ala Arg Ser Asp Glu Leu
 405 410 415
 Ser Arg His Arg Arg Thr His Thr Gly Glu Lys Lys Phe Ala Cys Pro
 420 425 430
 Met Cys Asp Arg Arg Phe Met Arg Ser Asp His Leu Thr Lys His Ala
 435 440 445
 Arg Arg His Leu Ser Ala Lys Lys Leu Pro Asn Trp Gln Met Glu Val
 450 455 460
 Ser Lys Leu Asn Asp Ile Ala Leu Pro Pro Thr Pro Ala Pro Thr Gln
 465 470 475 480

<210> 15
 <211> 6
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:hexahistidine
 (His) affinity tag

<400> 15
 His His His His His His
 1 5

<210> 16
 <211> 200
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:poly-Gly
 flexible linker

<220>
 <221> MOD_RES
 <222> (6)..(200)
 <223> Gly residues from position 6 to 200 may be present
 or absent

<400> 16
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 20 25 30
 Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly
 35 40 45
 Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly
 50 55 60
 Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly
 65 70 75 80

